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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,984	07/03/2003	Ward R. Spears	59525 (71850)	4359
21874	7590	07/01/2004	EXAMINER	
EDWARDS & ANGELL, LLP			GRAY, JILL M	
P.O. BOX 55874			ART UNIT	PAPER NUMBER
BOSTON, MA 02205			1774	

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/613,984

Applicant(s)

SPEARS

Examiner

Jill M. Gray

Art Unit

1774

*[Handwritten signature]*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 6, "18" and "16". Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 13, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 13, 15, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al, 6,299,718 B1 (Kimura).

Kimura discloses a hybrid composite flywheel rim comprising at least two different types of fibers impregnated with a thermosetting resin, said two different fibers having different elastic moduli, per claim 1. See column 2, lines 45-50, column 3, lines 57-67 and column 5, lines 42-53. As to claims 13 and 15, Kimura teaches that the fibers can be carbon fiber and glass fibers and have a difference in elastic moduli, further teaching in Figs. 3-5 that the fibers are in a cross hatch pattern. See column 6, lines 32-38. Regarding claim 18, Kimura teaches an annular structure having a plurality of zones, each with multiple fiber layers in a resin matrix, each said fiber layer having a mixture of carbon fiber tows and glass fiber tows at a ratio of tows that is constant in

each layer of any single zone. See columns 8 and 9. As to the thermosetting resin being epoxy (claim 1 and 13), the language of "such as epoxy" in the claims is merely exemplary and has not been treated as positive recitation of claim limitation.

Accordingly, the teachings of Kimura anticipate the invention as claimed in the present claims 1, 13, 15 and 18.

Claims 6, 7, 12, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Publication EP 1199493A2, (hereinafter Detore).

For the record, applicants are reminded that in CIP applications, that subject matter that is added or considered new is not entitled to the earlier effective filing date.

Detore teaches a composite flywheel rim having multiple fiber layers that have a mixture of fibers of different elastic moduli, such as carbon fiber tows and glass fiber tows and that one of said fibers is distributed amongst the other fiber in a cross hatch pattern (per claims 7 and 13). See abstract and Fig. 4. In addition, Detore teaches that the equation as required by applicants in claims 6, 12, and 14 is satisfied. See pages 4-5 and claims 3, 6, and 8.

Therefore, the teachings of Detore anticipate the invention as claimed in present claims 6, 7, 12, 13, and 14.

Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Detore et al, US 2002/0083791 A1 (Detore).

Detore teaches a hybrid composite flywheel rim comprising an annular structure having a plurality of layers wherein each layer is formed from a mixture of two different types of fibers impregnated with a thermosetting resin, such as epoxy, said two different

types of fibers having different elastic moduli wherein one of said two fiber types is randomly distributed amongst the other fiber type, as required by claims 1-2, 8, 15 and 18. See page 1, section [0009] and page 3, section [0037]. Regarding claims 3, 5, 9, 11, and 16, Detore teaches at page 2, section [0019] that the ratio of glass fiber tows to carbon fiber tows can be incrementally increased in each layer to produce a layer with a greater proportion of carbon fiber tows, resulting in at least one layer that is formed entirely from one of the low modulus fiber and the high modulus fiber and where at least one of the strength and stiffness increases in each layer. As to the difference in moduli as required by claims 4, 10, and 17, this value is inherent in the fibers of Detore because Detore teaches the same type of fibers contemplated by applicants in the subject matter defined by the invention when the claims are read in light of the specification. As to claims 7 and 13, Detore in Fig. 4, teaches that the two fiber types are in a cross hatch pattern. Regarding claims 6, 12, and 14, Detore teaches at page 3, sections [0026] –[0036] that the desirable random or uniform carbon fiber tow distribution is satisfied by the same equations as claimed by applicants.


Therefore, the teachings of Detore anticipate the invention as claimed in present claims 1-18.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jill M. Gray  
Examiner  
Art Unit 1774

jmg